AN ANALYTICAL STUDY OF COST ESTIMATION AND RETURNS OF SELECTED AGRICULTURAL COMMODITIES IN NANDED DISTRICT

Research Proposal

Submitted to

Swami Ramanand Teerth Marathwada University

In the partial fulfillment of the Degree of

DOCTOR OF PHILOSOPHY IN MANAGEMENT

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MARCH 2018

स्वामी रामानंद तीर्थ मराठवाडा विद्यापीठ, नांदेड.

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Introduction

"If the village perishes India will perish too" claimed Mahatma Gandhi our father of the Nation. The village economy largely depends on farming, as it is the primary occupation of the villagers. If we want to strengthen our economy eventually we need to focus on making this occupation more profitable so that we can achieve our goal of economic development. Even after seven decades of Independence Agriculture continues to be the strong base of the socio-economic structure of the country. In addition its contribution of a measurable part of the economy and financial security to the two-third population of the country, it plays a vital role in providing stability to economic condition of supply and demand of agricultural commodities. This concern of balancing the supply and demand in itself is as difficult as the diversified and vibrant domain of agricultural crop production.

The profit and costs of the farming can be calculated by discovering the correlation among the costs incurred and the returns gained from a particular crop by an enterprise. In case of individual farmers, the information on cost and returns would disclose an input-output correlation and help in bringing out the variations of unit costs incurred between the less efficient and more efficient farming practices.

The elasticity of demand explains the correlation between the fluctuations in the price and the demand. The cost of cultivation helps in the determination of prices. The cost of cultivation unveils the various agricultural inputs required by a farmer to produce the final agricultural crop. In agricultural sector analysis of the cost and return plays a vital role. Modern technological equipments such as advanced machineries and high energy inputs like organic fertilizers, pesticides, irrigation and as such were not much used during the early sixties, in India. The energy consumption part was almost ignored by the agricultural farmers due to easy availability and at a marginally low price but now it has become a major problem for the agricultural sector.

In modern era, the cost of the agricultural inputs has been increased drastically but the price of final products produced from the agriculture has not amplified to that extent. The prices of finished agricultural products are not only dependent on cost of inputs but also on the uncertainty of seasons such as Rain, weather, market forces such as buying behavior, demand and supply etc.

On this basis it becomes important to carry out the study of cost and returns of agricultural commodities for making policy decisions for the advantage of both, the producers and the consumers. Apart from this it would also help us in managing the food security. The imbalanced demand and supply of different agricultural commodities respond differently in fixation of the price. The government of India strives to offer Minimum Support Price (MSP) to the agricultural commodities which by and large differ from the actual costs incurred on the production of the agricultural commodity. The research on cost variations take into consideration, their divergent patterns in long-term and short-term perspectives. However a continuous growth of agricultural production would help us to maintain the price rises in the long-run supplies of food and agricultural raw material; hitherto in the short-run and medium-run, the cost variations of agricultural commodities shall become an inevitable event in the agricultural growth system due to the unpredictable nature of in-built aspects such as seasonal production cycle which largely depend upon seasonal cycles of agro-climatic conditions. Therefore, the cost variability is embedded in the production and consumption patterns of agricultural commodities.

The cost of agricultural commodities as of largely depending on the market equilibrium of supply and demand has certain characteristics that are region and economy specific. In India, the differences in the cost of farm product and cost of inputs in agricultural products also arise due to the asymmetrical characteristics shown by them that emerge from the nature of production system for these products.

The agricultural commodities selected for the present study are Banana, Sugarcane and Soyabean. These crops basically represent the wide cross sectional regions of Nanded Districts' agricultural produce with diverse seasonality patterns. The selected crops are largely diversified

on account of their duration required for production, occurrence of production, target consumers and profit making potential.

Statement of the Problem

Post-independence era has led to a substantial growth in the agricultural sector in terms of increase in output, yields and area under cultivation. The robust development in agriculture due to the technological advancement had made India a self-reliant country in food grains and a leading producer of several other agricultural commodities in the world.

India has emerged as the largest producer of fruits, cashew nuts, coconuts, tea and milk in the world; it has been ranked as the second largest producer of wheat, vegetables, sugar and fish and the third largest producer of rice and tobacco. Various agricultural revolutions such as the green revolution in major crops, yellow revolution in the oilseeds, white revolution in milk production, blue revolution in fish production and golden revolution in horticulture significantly added for the present achievement in the sub-sectors. On the other hand the output growth has substantially declined in many crops, in recent years. There is also concern regarding stagnant prices for many commodities. In present context, an effort has been made to inquire about trends in output growth and cost of major selected agricultural commodities.

The cost and returns of agricultural commodities are determined by demand and supply, pattern of production, cost incurred in production and the like. By and large, the agricultural commodities are perishable in nature and their needs are vital. The price of agricultural commodities is not proportionate to the cost of production. Whatever may be the cost; the price is determined by demand and supply of the product. The cost of the inputs increases due to various causes. In this background the statement of the problem of this study is stated as: “To analyze the ratio of cost-benefit, inputs and outputs of select agricultural commodities such as Banana, Sugarcane, and Soyabean in Nanded district so that the profitability of these commodities may be ascertained”.

Objectives of the Study

The main objectives of the study are:

1. To study the cultivation pattern of select agricultural commodities.
2. To analyze the trend and growth of area, production and productivity of select agricultural commodities during 2009-10 to 2019-20.
3. To study the cost and return structure of the select agricultural commodities.
4. To analyze the resource-use efficiency and marginal value productivity of the select agricultural commodities.
5. To propose suitable suggestions for effective returns from select agricultural commodities on the basis of findings.

Hypothesis of the Study

H_0 There is no significant difference in the cost of inputs and returns earned from the selected agricultural commodities i.e., Banana, Sugarcane and Soyabean.

H_1 There is significant difference in the cost of inputs and returns earned from the selected agricultural commodities i.e., Banana, Sugarcane and Soyabean.

H_0 There is no significant difference in the yield of the selected agricultural commodities i.e., Banana, Sugarcane and Soyabean and the cost of inputs.

H_1There is significant difference in the yield of the selected agricultural commodities i.e., Banana, Sugarcane and Soyabean and the cost of inputs.

Scope of the Study

The cost and returns of agricultural commodities is mainly determined by demand and supply factors. The changes in real cost of production of agricultural commodities are determined by the supply and demand. When other things remain the same, larger the demand, higher is the price and vice versa. The major factors are demand and supply, consumption pattern, income level and population. The determination of yield is affected by the methods of cultivation. Hence, an attempt is made to analyze the factors determining the cost of production and returns from select agricultural commodities.

Methodology

Choice of the Study Area

The study relates to Nanded district in Maharashtra. Agriculture is a dominant sector in this district and it is one among the major Banana, Sugarcane, and Soyabean producing districts in Maharashtra. The district was selected because of relatively higher productivity of Banana, Sugarcane, and Soyabean in the state.

Collection of Data

This study shall be based on both primary and secondary data. Detailed, comprehensive, and structured schedules shall be prepared, incorporating the household particulars, to collect primary data. The secondary data shall be collected from various sources such as, the Block Development Offices, the State Information Centre, Nanded, the Office of the Assistant Director of Statistics, the Office of the Joint Director of Agriculture, Nanded, Office of the Block Statistical Inspectors of Block Development Office, and the Village Administrative Officers of the respective villages in the blocks.

Sampling Design

Convenient sampling shall be adopted for the present study with a total population of 246604. When enquired with the District Statistical Office, Nanded, it is understood that there are 1096 farmers engaged in banana cultivation, 223061 farmers are engaged in Soyabean cultivation and 22447 farmers are engaged in cultivation of Sugarcane. At the confidence level of 99% with a margin error of 5%, with the help of survey monkey sample size calculator at above mentioned levels the sample size selected is 664.

Sl.No.	Farmers	Banana	Sugarcane	Soyabean
(1)	(2)	(3)	(5)	(11)
1	MARGINAL	329	8789	75476
2	SMALL	311	7933	87155
3	SEMIMEDIUM	325	4651	49104
4	MEDIUM	119	1009	10808
5	LARGE	12	65	518
6	ALL CLASSES	1096	22447	223061

Period of Study

The study shall be based on the data collected during the agricultural year 2019-20. However, the necessary data are relevant to the period from January 2010 to December 2020.

Tools of Analysis

In order to estimate the changes in price of select agricultural commodities during the study period, trend equation shall be estimated by using both Linear and Semi-log Model. In order to estimate the cost and return structure, the concepts of Cost A and Cost C shall be used with the

help of Farm Management Studies. Apart from this various statistical tools available shall be used as and when required for the study.

Limitation of the Study

The present research only takes into consideration Nanded District of Maharashtra State and Selected commodities such as Banana, Sugarcane and Soyabean. Similar studies can be carried out by opting for various geographical regions of the country with various agricultural commodities.

Chapter Scheme

The chapter scheme of the thesis is as follows:

Chapter I: Introduction
The origin and uses of the selected agricultural crops, statement of the problem, scope of the study, review of literature, objectives of the study, methodology, and limitations of the study.

Chapter II: Profile of the study area.

Chapter III: Study of selected agricultural commodities

Chapter IV: Data Analysis and Presentation
Analysis of cost and return of respective agricultural commodities cultivated in Nanded district.

Chapter VII: Conclusion, findings and Summary along with suggestions made on the basis of the study.

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